





Risk Management QUIZ

- List, in correct sequence, the five steps of the risk management process.
- Explain the difference between risk management and risk assessment
- List the four rules of risk management
- What is the key word for each of the four rules of risk management
- List the three methods of tactical decision-making
- Describe how RM is applied to the three methods of tactical decision-making
- Define the terms "Hazard" and "Risk" and explain the difference
- Define the terms "gambling" and "risk management" and explain the difference



Wartime Accident Losses

"Accidents, which are usually preventable, reduce your ability to complete the mission."



What Price are We Paying Now?

Historically non-threat losses have almost always exceeded threat losses

Desert Shield Desert Storm

Casualties

Hostile fire 2.9 (20%)

Accidents 11.14 (75%)

The Doha Catastrophe

- Dead
- Tanks destroyed
- Injured SP artillery déstroyed
 - Trucks
 - -45 tons of ammunition



The non-threat losses can be cut 50-100%



Battle and Non-Battle Gasualties

Rate* per 1,000 soldiers and percent

Army	W.W.II 1942-45	Korea 1950-53	Vietnam 1965-72	DS/S 1990-91	NTC FY93 (BLUFOR-GROUND)
Accident	95.57	120.33	154.66	11.14	2.23
	56%	44%	54%	75%	3%
Friendly	1.50***	3.03***	2.67***	.68	7.87***
Fire	1%	1%	1%	5%	9%
Enemy	73.61	148.56	131.20	2.90	74.17****
Action	43%	55%	45%	20%	88%

^{*} Per 12 months for W.W.II, Korea and Vietnam; 14 months for DS/S; per rotation NTC.

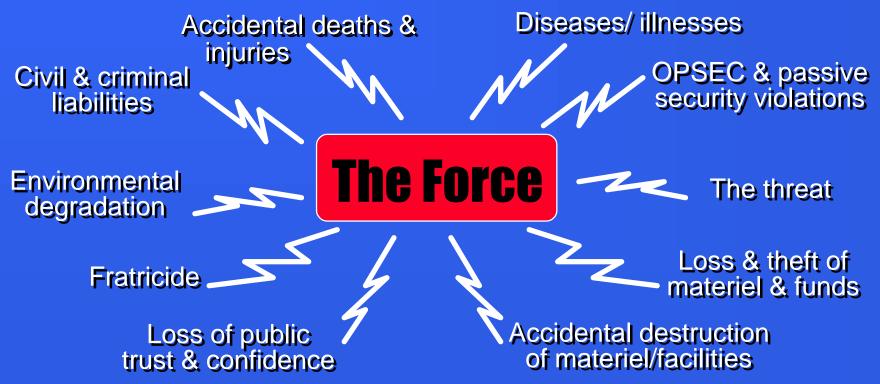
^{**} Deaths and injuries (ground and aviation) for entire war/operation.

^{***} Research based estimate (2% of all direct- and indirect- fire losses).

^{****} Simulated (MILES) direct fire vehicle kills.



Risks Threaten the Force and Its Capabilities



These risks can be minimized if they are effectively detected and controlled - Risk Management



TERMINAL LEARNING OBJECTIVE:

As a leader, the student will integrate Risk Management into unit operations under his/her control IAW FM 101-5, Risk Management Reference Guide and Course Book Vol 4, USASC Risk Management Leader's Guide and CALL Newsletter No. 93-9, (Force Protection (Safety)).



Risk Management Concept

Risk management is a systems based concept. It is the application of systematic thinking to the problems associated with making military operations safer and more effective.



Risk Management Concept

- RM originally developed to improve safety in the development of weapons, aircraft, space vehicles, and nuclear power.
- RM found to be especially effective in dealing with high-risk complex activities. This has led to the application of RM concepts in tactical training scenarios.



Risk Management Concept

- RM not a science, it doesn't provide leaders with a precise course of action.
- RM not just "common sense" or "something good leaders have always done."
- RM a process that can be fully integrated into established Army systems for force development, projection and sustainment.



- Risk management concepts are not confined to systems development or tactical operations. They have been applied successfully to other areas of Army operations:
 - Physical Security (AR 190-51)
 - Intelligence (AR 380-19)
 - Tactical Doctrine (FM 100-5)
 - Finance
 - Safety (AR 385-10).



- How much of a problem a hazard presents can't be determined until the hazard is converted to a risk.
- When the hazard is expressed in terms of how likely it is to occur, and how serious the consequences are if it does occur . . . then the commander can make rational decisions about how to deal with that hazard.



- Army operations require safety risk management to be very flexible.
- Leaders must often make tough, complex decisions in a matter of minutes or seconds. Safety risk management must be compressible and adaptable to these time constraints or be left out.



On the other hand, many times we have weeks or months available for planning an operation. The level of detail that goes into the process depends on the time available and the extent of the risk.



Gambling vs. Risk Management.

Bold, aggressive risk takers are needed, admired, and endorsed in the Army. Some people admire and endorse gamblers as bold risk takers.



Gambling vs. Risk Management.

Gamblers, if they are successful, are hard to separate from the bold risk taker who uses the risk management process to detect and control hazards. But sooner or later the gambler loses.



- Gambling vs. Risk Management.
 - The key difference between the gambler and the bold risk taker is that the risk managing leader can reasonably predict the outcome.
 - The gambler is only guessing.



Risk Management vs. Gambling So what is the difference between gambling and managing risk?

The result?

The decision?

The process?



Risk Management vs. Gambling

The result? No!

The decision? No!

The process? Yes! A gambler will perform an operation without regard to the risk. The risk manager weighs the risk with the mission/ training benefits and makes a good risk decision. He will also put controls on the risks and make the soldiers involved in the operation aware of the risks and his controls.



FM 100-5, Operations

"Safety is part of all combat operations and operations other than war. Commanders at all levels should embrace safety as a principal element in all they do. Sustained, high-tempo operations can put soldiers at risk. Strong command and high levels of discipline and training lessen those risks. Safe procedures represent a skill - a product of enforce standards and training. Safety in training, planning, and operations is crucial to successful combat operation and the preservation of combat power."



- Elements of combat power.
 - Maneuver.
 - Firepower.

NOTE:

Maneuver and Firepower are significant contributors to risk. Commanders seek to stretch these elements to the limit to gain an advantage over the enemy and thus incur increased risk. Effective risk management will eliminate risk when possible, control residual risk, and allow the command to accept risk when the benefit outweighs the cost.

- Leadership.
- Protection.



Protection.

- Protection conserves the fighting potential of a force so commanders can apply it at the decisive time and place.
- In addition to safety, protection includes tactical survivability, industrial hygiene, environmental protection, occupational health, and fratricide prevention. Although safety responsibilities overlap the other elements of protection, safety is the largest part of protection.



FIVI 101-5

Staff Organization and Operations

"When safety is integral to battle-focused training as Force Protection, safe procedures in combat are a natural consequence."



Society's acceptance, and components of risk.



- Realistic Training -vs- Safe Training
 - "Train like we will fight" -vs- "Safety is paramount".
 - "Push your troops to the limit" -vs-"We will have no accidents"
- Training as we will fight may not always be practical because the risk can outweigh the benefit.



Voluntary Activities

- Accept almost any risk short of suicide.
 - Ultralights
 - Bungee jumping
 - Mountain climbing

Average person will accept roughly 1,000 times as much risk voluntarily as he will involuntarily

-Loss of life - Various risks.

Involuntary Activities

- •Acceptable threshold 1 in 10,000.
 - 1 in 30 AAR Aviation test pilot
 - 1 in 300 AAR British fisherman
 - 1 in 500 AAR Army aviator
 - •1 in 1000 AAR miner
 - 1 in 2000 AAR Soldier
 - 1 in 6500 AAR American motorist

1 in 8000 AAR JQ citizen

AAR - Average

annual risk of

death



Risk - chance of hazard or bad consequences; exposure to chance of injury or loss. (Oxford Dictionary, 1976)



- Risk an expression of potential loss stated in terms of hazard exposure, severity, and probability. Risks components:
 - → Exposure the condition of being subjected to a hazard for a defined period of time.
 - Severity the expected consequence, defined by degree of injury, property damage, or other mission impairing factor (regulatory action, adverse publicity, etc.), that could occur from a hazard.
 - → Probability the likelihood that given an exposure to a hazard, an accident will occur.



Fundamental precepts

- The greater the risk the more senior the final decision maker should be.
- When in the high-risk zone, everyone from the commander to the individual must be aware of the risk implication.
- All risk variations that can be controlled, must be controlled.
- By-the-book disciplined operations are mandatory.



Key Definitions

• Hazard:

- any real or potential condition that can cause injury, illness or death of personnel, or damage to, or loss of equipment or property. (AR 310-25)
- a condition with the potential of causing injury, loss of material, or reduction of ability to personnel, damage to equipment or structures to perform a prescribed function.
- Risk an expression of possible loss over a specific period of time or number of operational cycles.



Key Definitions

- Risk Management the process of identifying and controlling hazards to protect the force.
- Risk Assessment the process of detecting hazards and systematically assessing their overall risk. It involves the first two steps of the Risk Management process.
- Gambling Making non-systematic risk decisions.

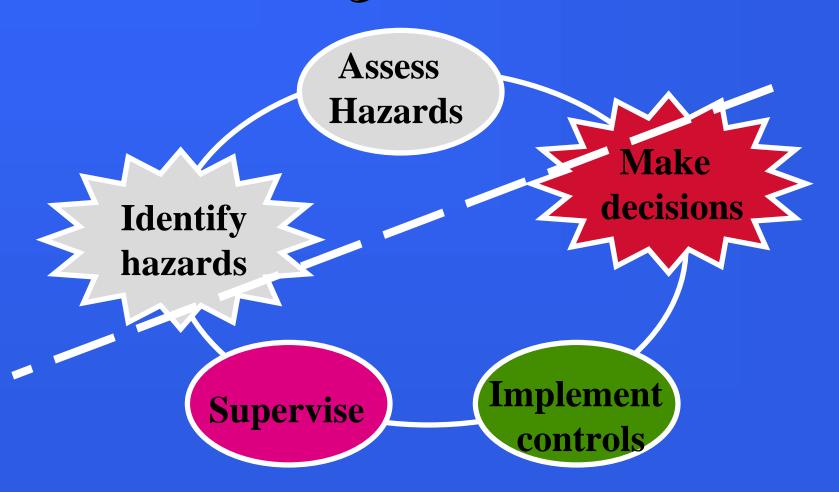


Risk Management Process



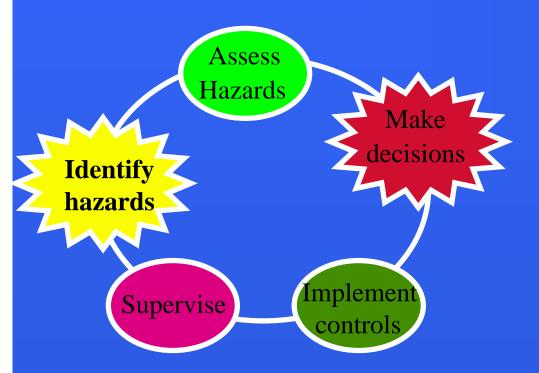


Risk Management Process





Risk Management Process



- Identify Hazards identify the major events
 in the operational
 sequence and the hazards
 associated with all
 specified and implied
 tasks.
- Assess Hazards
- Develop controls
- Implement controls
- Supervise



Risk Management Process.



- Identify Hazards
- Assess Hazardsdetermine the
 magnitude of the risk by
 estimating the
 probability (frequency)
 and the effect (severity)
 if the event occurs.
- Develop controls
- Implement controls
- Supervise



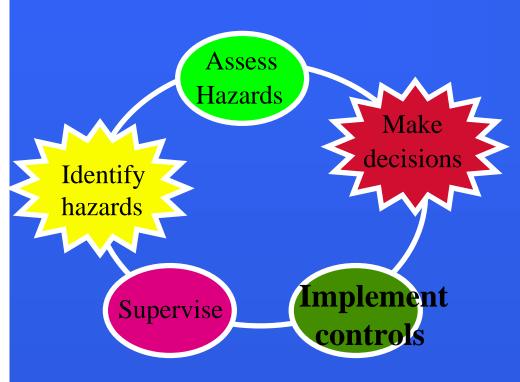
Risk Management Process.



- Identify Hazards
- Assess Hazards
- Develop Controls and Make Risk Decisions make risk acceptance decisions by balancing the benefits against the risk. Eliminate unnecessary risks and reduce the magnitude of mission-essential risks by applying controls.
- Implement controls
- Supervise



Risk Management Process.



- Identify Hazards
- Assess Hazards
- Develop controls
- Implement controlsintegrate controls into:
 - Plans,
 - Operations orders (OPORDs),
 - Standing Operating Procedures (SOPs),
 - Training performance standards,
 - Rehearsals.
- Supervise



Risk Management Process.



- Identify Hazards
- Assess Hazards
- Develop controls
- Implement controls
- Supervise- determine the effectiveness of risk controls by supervising and enforcing controls and standards.



- Key Points of Risk Management
 - Integrate risk management into planning.
 - Accept no unnecessary risks.
 - Make risk decisions at the proper level.
 - Accept risks if the benefit outweighs the cost.



Key Points of Risk Management

- Integrate risk management into planning. It's easier to integrate risk management early in the life cycle of any operation (training or combat).
- "Quality must be built in at the design stage.
 It may be too late, once plans are on their way."
 W. Edwards Deming

Out of the Crisis, pg. 49



Key Points of Risk Management

- Accept no unnecessary risks.
 - → Key word "unnecessary".
 - Risk that does not contribute meaningfully to the mission.
- "Don't never take a chance you don't have to."
 Standing Orders

Rogers' Rangers 1759



Key Points of Risk Management

Make risk decisions at the proper level.

The "proper level" is the level where the decision maker has the maturity and experience to make a good decision. Normally, this would be the leader responsible for the mission. Decisions should be made at the lowest possible level as long as the decision maker has the experience and maturity to make a good decision.



Key Points of Risk Management

- Accept risks if the benefit outweighs the cost.
 - Can not eliminate all risks.
- o "...accept risk only to the point that the benefits outweigh the potential losses."

 Dennis J. Reimer

General, United States Army
Chief of Staff



Hazard Probability of a Risk

- A risk assessment matrix is a tool that can be used to determine how risky an identified hazard is. Standard terms associated with risk assessment matrices include:
- Probability. How likely is an event to occur.
- Effect. Consequences if the event occurs.



Risk Assessment Matrix

			HAZARD PROBABILITY				
		Frequent	Likely	Occasional	Seldom	Unlikely	
			Α	В	С	D	E
E	Catastrophic	I	Extreme	ely			
F	Critical	II	High	Н	igh		
E C	Moderate	Ш		Medium		Low	
Т	Negligible	IV					



HAZARD PROBABILITY					
Frequent Likely Occasional Seldom Unlikely					
Α	В	С	D	E	

Frequent

- Individual item. Occurs often in the life of the system.
- Fleet or inventory. Continuously experienced.
- Individual soldier. Occurs often in career.
- All soldiers exposed. Continuously experienced.



HAZARD PROBABILITY						
Frequent Likely Occasional Seldom Unlikely						
Α	В	С	D	E		

Likely

- Individual item. Occurs several times in the life of the system.
- Fleet or inventory. Occurs frequently.
- Individual soldier. Occurs several times in career.
- All soldiers exposed. Occurs frequently.



HAZARD PROBABILITY					
Frequent Likely Occasional Seldom Unlikely					
Α	В	С	D	E	

Occasional

- Individual item. Will occur in the life of the system.
- Fleet or inventory. Occurs several times in the life of the system.
- Individual soldier. Will occur in career.
- All soldiers exposed. Occurs sporadically.



HAZARD PROBABILITY						
Frequent Likely Occasional Seldom Unlikely						
Α	В	С	D	E		

Seldom

- Individual item. Unlikely but could occur in the life of the system.
- Fleet or inventory. Unlikely but can be expected to occur in the life of the system.
- Individual soldier. Unlikely but could occur in career.
- All soldiers exposed. Occurs seldom.

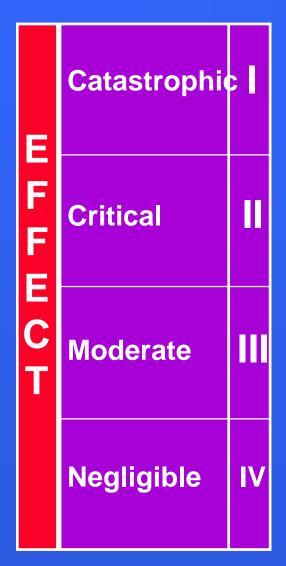


HAZARD PROBABILITY					
Frequent Likely Occasional Seldom Unlikely					
Α	В	С	D	E	

Unlikely

- Individual item. So unlikely you can assume it will not occur in the life of the system.
- Fleet or inventory. Unlikely but could occur in the life of the system.
- Individual soldier. So unlikely you can assume it will not occur in a career.
- All soldiers exposed. Occurs very rarely.





Catastrophic - Death or permanent total disability, system loss, major property damage.

Critical - Permanent partial disability, temporary total disability in excess of 3 months, major system damage, significant property damage.

Moderate - Minor injury, lost workday accident, compensible injury or illness, minor system damage, minor property damage.

Negligible - First aid or minor supportive medical treatment, minor system impairment.



Risk Levels



Extremely High - Loss of ability to accomplish mission.

High - Significantly degrades mission capability in terms of required mission standards.

Medium - Degrades mission capabilities in terms of required mission.

Low - Little or no impact on mission accomplishment.



Applying RM to Decision-making - FM101-5

Quick decision-making - Mental application of the RM process by the leader faced with unforeseen, imminent crisis or emergency. Add time and techniques

Combat decision-making - Application of RM process by commander and staff when time is constrained. Identifies risks associated with COA and controls appropriate.

Add time and techniques

Deliberate decision-making - Application of the RM process using worksheets, and RM tools - operations analysis, PHA, risk control options, training realism assessment, implementation procedures, and sustained monitoring.

Working group application of more detailed qualitative and quantitative techniques, especially in the hazard ID, hazard assessment, and risk control options phase.



Hazard Detection Resources / Tools

- Experience.
- Experts.
- Regulations and manuals.
- Accident data.
- Hazard scenarios.
- Interface analysis.
- Risk assessment matrix.
- Readiness assessments.
- Safety quizzes.

- Cause and effect diagram.
- Change analysis.
- Energy trace& barrier analysis.
- Logic diagrams.
- Mapping techniques.
- What-if analysis.
- Training realism.
 assessment.
- Opportunity

RM-95-54



- Quick decision-making -using METT-T.
 - Identify Hazards.
 - Assess Hazards.
 - Develop Controls and Make Risk Decisions.
 - Implement controls.
 - Supervise.

- Hazard factors(METT-T)
 - Mission.
 - **Enemy.**
 - **Terrain.**
 - Training of personnel.
 - Time of day.
 - **-Equipment.**
 - -Weather.
- Other specific hazards/guidance.



- Using RIM for quick decision-making
 - Use the scenario, "Reducing the risk in training-Nobody's fault", TVT 20-932.
 - Read the scenario on page 25 of the Risk Management Reference Guide and Course Book.
 - Hazards, hazard assessment, controls for hazards.



Hazards

- Non/weak swimmers
- Stream current
- Stream width
- Stream depth
- Debris
- Fatigue
- Water temperature
- Equipment weight
- Weapons security



Hazard

Non/weak swimmers

Stream current

Stream width

Stream depth

Debris

Fatigue

Water temperature

Equipment weight

Weapons security

Risk

High/EH

Medium

Low

High

Low

Low

Low

High

Low



Hazard

- Non/weak swimmers
- Stream current
- Stream width
- Stream depth
- Debris
- Fatigue
- Water temperature
- Equipment weight
- Weapons security

Controls

Eliminate

Recon crossing

1 rope crossing

Strong swimmer 1st

Face up-stream

Rucksack on rope

"Dummy" cord



Applying Risk Management to Deliberate Decision-making - FM101-5

- Identify Hazards
 - Conduct an operations analysis. An operations analysis is a description, normally in time sequence, of the events that are expected to occur during the operation. Break the operation down into sub-elements (specified and implied tasks).



Identify Hazards

- Complete a preliminary hazard analysis (PHA). List the various hazards that could result in accidents. It is developed using experience, brainstorming, databases, and scenario thinking.
- If necessary, and time permits, conduct a more in-depth hazard analysis.



- Assess Hazards
 - Assess all hazards based on probability, severity, and mission impact.
 - Hazard Identification and hazard assessment combine to form a risk assessment.

Assess Hazards

Identify Hazards
Assess Hazards
develop controls and make risk decisions
Implement Controls
Supervise



Develop Controls and Make Risk Decisions

Develop risk control options starting with the most serious risks. Use the risk control option matrix in the Risk Management Reference Guide and Course Book (staff)



Control Option Matrix

Control Option	Individual	Supervisor	Commander
 Engineer 			
Guard			
Limit exposure			
Personnel			
selection			
Train & Educate			
Warn			
Motivate			
Reduce effects			
 Rehabilitate 			



- Develop Controls and Make Risk
 Decisions
 - Complete a Training Realism Assessment (TRA).
 - The TRA is designed to assure that the risk control options selected have the maximum battle focus and least possible adverse impact on realism. (staff)







- Develop Controls and Make Risk
 Decisions
 - Complete an opportunity assessment. Use a training realism assessment to detect opportunity to improve realism in training.



- Develop Controls and Make Risk Decisions
 - Make a risk decision by selecting controls that will reduce the risk to a minimum consistent with the mission. (commander)
 - Consideration is given to realism, time, money, or other resources.



Risk Decision -make the risk decision at the proper level-

		MISSION COMPLEXITY					
		Brigade	Battalion	Company	Platoon	Squad	
R I	Extremely High	Divisio	n				
	High		Bri	gade			
S K	Medium		Ba	ttalion Con		npany	
	Low						



- Implement Controls
 - Standing Operating Procedures (SOP'S).
 - Orders.
 - Supervision.
 - Training.
 - New equipment.



Supervise

- Maintain the effectiveness of risk controls.
- Assure that risk control measures are performing as expected.
- Re-evaluate risk control measures to ensure they are being maintained at a high level.



Hazards	RAC	Controls	Residua RAC	al Implement
				RM-95-72

RM-95-72



Applying Risk Management to Deliberate Decision-making - FM101-5

- Conduct Risk Management Application.
 - Ammunition transportation case, page 29 of the Risk Management Reference Guide and Course Book.
 - Use of cause & effect diagram, and PHA.



Applying Risk Management to Deliberate Decision-making - FM101-5 In-depth Application of Risk Management

- Extensive coordination between subject matter experts and technical experts.
- More complex analysis, logic diagram, fault tree, energy analysis, walk through, etc..

RM-95-74



Applying Risk Management to Deliberate Decision-making - FM101-5 In-depth Application of Risk Management

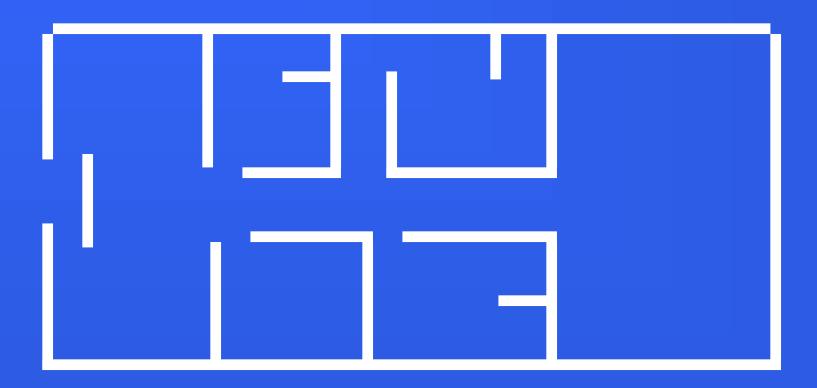
- Testing in similar or smaller scale.
- Higher level, more formal risk decision procedures.
- More coverage of the operational life cycle.



- Risk Management Application "The tire house".
 - Read scenario on page 92-97.
 - Describe the Tirehouse.
 - Operations analysis, PHA, Logic diagram, and Fault tree.
 - **Benefits.**



Tire house





OPERATIONS ANALYSIS

Tirehouse Development Phase

D-200 - Integrate safety into development plans

- Initiate hazard log
- Select location
- Assess risk exposure 360'
- Assess risk of proposed floor plan
- Assess proposed construction techniques
- D-170 Assure risk decisions on final phase
- **D-160 Periodically monitor construction**



- D-70 Conduct pre-test survey
- D-65 Conduct operational readiness test
- **D-60 Conduct full operational test**
- D-30 Conduct operational tests using troop unit
- D-15 Final authority review & approval
- D-0 Operational close monitoring of initial operation.



Tirehouse MOUT training

Phase D-5 to D-0 - Garrison Preparation

- Prepare weapons & ammunition
- Prerequisite training
- Prepare transportation
- Training preparation
- 0600-0800 Deploy to Training Area
 - Movement of personnel
 - Movement of grenades/ammunition



- 0800-0930 Introductory Training in bleachers
- 0930-1200 Tirehouse dry-fire and blank-fire ops
 - Concurrent training No live ammo
 - Interior clearance procedures blank fire
- 1300-1800 Tirehouse live fire operations
 - Concurrent training No live ammo
 - Operational tirehouse training
 - Employment of grenades
 - Employment of small arms



Tirehouse Training Preliminary Hazard Analysis

Garrison prep

- Improper storage ammo/grenades
 - Security
 - Fire
 - Incompatibility
 - Improper signs/placards

Deployment to TA

Initial on-site tng

- Vehicle accidents
- Bleacher accidents
- Cold injury



Preliminary Hazard Analysis

Dry-fire opns - Trips and falls

- Instructor falls from wall

Blank-fire

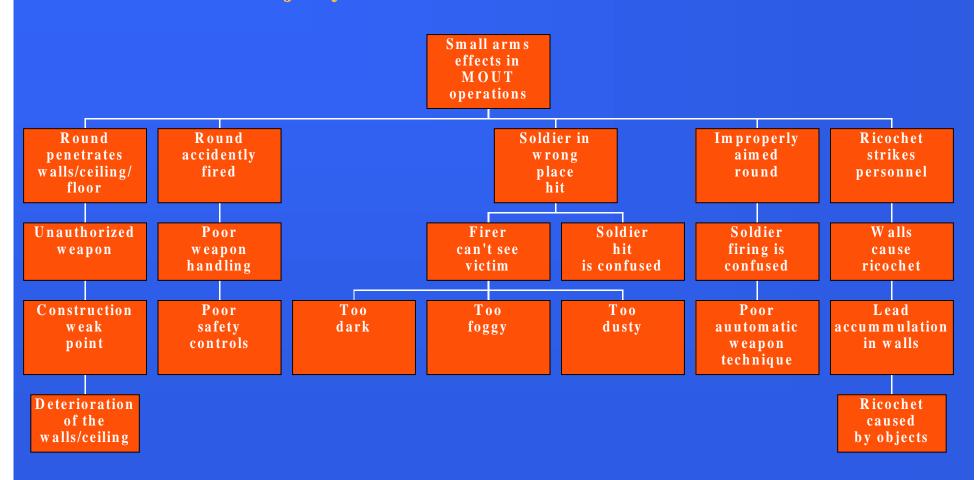
- Same as dry-fire

Live-fire opns - Injury from grenade effects

- Intentional use
- Unintentional use
- Inside and outside tirehouse
 - Hearing loss
 - Injury from small arms effects

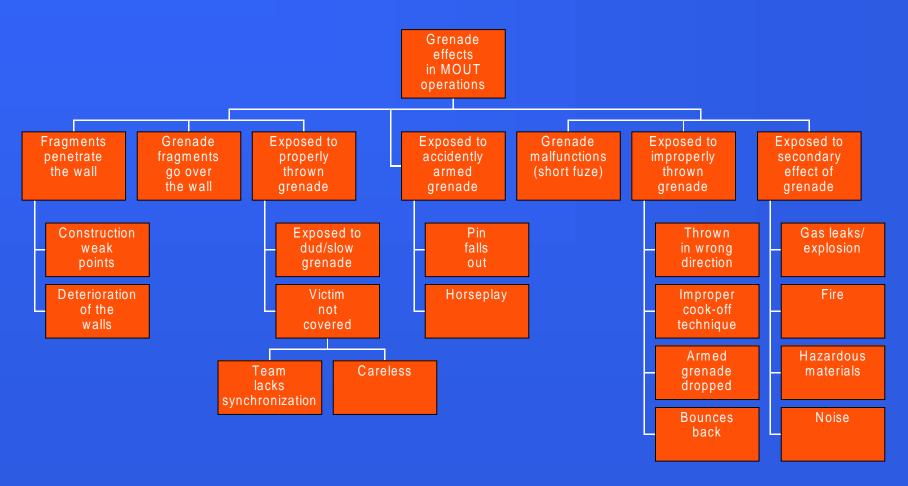


Logic Diagram Injury from Small Arms Effects



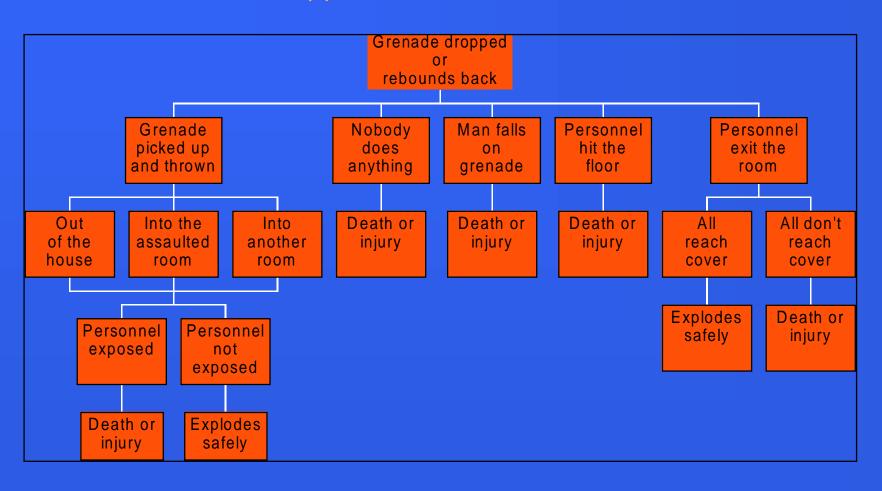


Logic Diagram Injury from Grenade Effects





Logic Diagram Dropped Grenade Scenario





- Levels and responsibilities of safety.
 - ◆Command level
 - Plan for safety.
 - Set safety standard.
 - Conduct training consistent with abilities of trainers.
 - Resource safety.
 - Make risk acceptance decisions when you can't eliminate the risk.



- Levels and responsibilities of safety.
 - ◆Leader level
 - Emphasize adherence to standards and accident prevention.
 - Assess and balance risk against training or operational requirements.
 - Recognize then eliminate or control, health and safety hazards.



- Levels and responsibilities of safety.
 - → Individual level
 - Understand individual safety responsibilities.
 - Recognize unsafe acts and conditions.
 - Perform to standards.



Unit level Risk Management

- ◆The Next Accident Assessment
 - Purpose to evaluate the potential risk of an individual or unit that may cause the next accident.
 - Based on three questions.
 - Who will have the next accident?
 - What kind of accident will it be?
 - What am I doing about it?



Unit level Risk Management

- →Safety Quizzes
 - Purpose. To assess the level of knowledge of critical safety skills in the unit.
 - Select critical safety skills and develop questions based on these skills. Give the quiz to all personnel or a sampling to determine the extent of knowledge.
 - Use the output to improve safety training, to qualify personnel, or as a metric to measure continuous.



Unit level Risk Management

- METL tasks and performance deficiencies
 - Purpose. To define shortcomings in METL tasks.
 - Use accident patterns or performance deficiencies to detect below standard METL task readiness. (see CALL newsletter 93-9)



- Risk Management and METL.
 - Safety has a go to war mission.
 - Safety is not a separate task, safety is a standard and a condition for every task.
 - Combining the RM process with the mission essential task list (METL) process and training management cycle.



- Troop Leading Procedures and the RM Process.
 - Receive the mission.
 ID hazard
 - Issue the warning order.
 - Make tentative plan.
 - Start necessary movement.
 - Conduct recon.----- Assess hazard
 - Complete the plan. ------ Risk decision
 - Issue Operations Order.---- Implement
 - → Supervise.----- Supervise



Integration of RM into Decision Making Process

Mission Risk Management

1. Identify Hazards

- Gather & analyze
METT-T facts to
identify hazards most
likely to result in loss of
combat power

Decision Making Process

- 1. Receive mission
- 2. Gather and consider information
- 3. Complete mission analysis, restate mission and issue planning guidance
- 4. Complete staff estimates
 - A. Develop/analyze /compare COAs (wargame)
 - **B.** Recommend COA



Integration of RM into Decision Making Process

Mission Risk Management

Decision Making Process

2. Assess Hazards

- A. Complete risk assessment for each course of action (COA)
- B. Enter risk level of each COA as a decision criteria

- 5. Complete commander's estimate
 - A. Analysis of COAs (wargame)
 - B. Decision (select COA)



Integration of RM into Decision Making Process

Mission Risk Management

Decision Making Process

- 3. Identify controls & make risk decisions
 - A. Identify and select controls for hazards most likely to result in loss of combat power
 - B. Make risk decision for selected COA accept residual risk level or evaluate decision

C. Concept of operation(Make risk decision and select controls)



Integration of RM into Decision Making Process

Mission Risk Management

Decision Making Process

4. Implement controls

- Communicate & implement controls integrate into paragraphs and graphics of OPORD

6. Prepare

8. Issue

7. Approve → Plans/Orders

5. Supervise

- Monitor & enforce controls. Revise as necessary





Traditional process vs. RM process

- Traditional Approach
 - "Common Sense".
 - Random hazard ID and assessment.
 - More omission.
 - Uninformed decision.
- Risk Management
 - Methodical.
 - Less omission.
 - Informed decision.



- Benefits of safety risk management.
 - Extensive experiments conducted by the NRC, NASA, and NIOSH have shown that subjects were able to consistently detect 50% more hazards by using safety risk management techniques compared to traditional procedures.



- Benefits of safety risk management.
 - Training realism and operational capability can be increased because use of the safety risk management process ensures that risks are neither over controlled nor under controlled. An optimum level of safety consistent with training realism is achieved.



- Benefits of safety risk management.
 - A unit that uses safety risk management successfully in training will use it in combat and can expect equally good results.
 - Example:

The 4th Infantry Division in Viet Nam reduced accidents by a full 50% on a year to year comparison by using the risk management techniques.

Improved overall combat effectiveness.



Consequences of failing to manage risks effectively:

- Death and injury to soldiers, civilian employees, and the public
- Damage to Army equipment
- Mission failure
- Ineffective training
- Violation of local, state, and Federal statutes
- Legal liability



One Risk Management Process With Multiple Application Options

Risk Management Long Range/Readiness Risk Management Near Term Risk Management Opportunity

Building units that are operationally ready to undertake missions at the limits of their capabilities

Train leaders and staff who can detect & control risks in the specific missions the unit undertakes

Use risk management to empower the unit to achieve continuous improvement of operational capabilities



Applications of Risk Management

Risk Management Long Range/Readiness Risk Management Near Term Risk Management Opportunity



To perform optimally, a unit must have a sound risk control foundation consisting of:

- Individuals possessing essential skills & positive attitudes
- Leaders who can manage risk effectively
- Unit standards that are right for the mission
- Training that provides essential skills & knowledge's
- Support elements that provide essential services



Risk Management Tools

The Next Accident Assessment	Safety Knowledge Quiz	Unit Accident Patterns	CTC Performance	Integration in Battle Focused Training Processes
Provides self and leader-based assessment of potential for accident involvement	Assesses the status of critical force protection skills and knowledge	Focusing on past accidents patterns in units of this kind. Learning from the mistakes of others.	Focusing on successful force protection performance at the various training centers	Build risk managemen t into the METL assessment s and training plans IAW FM-25-101



Applications of Risk Management

Risk management Long range/readiness Risk management | Risk management near term

opportunity



To perform optimally, unit leaders must be able to detect and control risks in specific missions assigned to the unit within operational resources and time constraints.



Applications of Risk Management

Governed by available time (METT-T)

Hasty RM

(Little time available)

Deliberate RM

(Time available & significant risks

In-depth RM

(High risk demanding action)

Mentally applying the basic five step process in the context of the appropriate troop leading/decision-making process.

- A meeting engagement

Designed to detect & control the risks of a specific mission usually including the following:

- A mission analysis
- A preliminary hazard list
- COA analysis
- Back briefs and rehearsals
- Integrate controls in OPORDS, FRAGOS, SOPs, graphics, etc.

Typical applications:

- Deliberate attacks
- Analysis of METL tasks

Detailed techniques incorporating deliberate RM procedures but going well beyond to assure maximum risk control. Typically limited to higher risk operations and requiring professional expertise. required.

Typical Application:

- New doctrinal concepts
- New missions/METL tasks